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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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JOHN S. HENDRICKS

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WALL & TONG, LLP/
SEDNA PATENT SERVICES, LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER

SALTARELLI, DOMINIC D

ART UNIT

PAPER NUMBER

2421

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/396,429	Applicant(s) HENDRICKS ET AL.	
	Examiner DOMINIC D. SALTARELLI	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,14,18,19,23,24,28,29,42,43,45-50,52-56 and 58-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,14,18,19,23,24,28,29,42,43,45-50,52-56 and 58-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 16, 2009 have been fully considered but they are not persuasive.

First, the Hoarty '034 patent claims priority to U.S. Patent No. 5,412,720, filed May 1, 1992. Figure 17 of this patent shows an I/O interface 1736, disclosed in col. 11, lines 43-44. The home interface for connecting to expansion modules disclosed by the Hoarty '034 patent is disclosed as being present in the home interface since May 1, 1992, prior to applicant's earliest filing date of December 9, 1992, which discloses such hardware upgrade ports for use in applicant's invention.

Second, the claim limitations found in the instant application recite that the modem is resident on the hardware upgrade itself. According to applicant's arguments submitted July 17, 2007, the support for hardware upgrade cards found in the December 9, 1992 disclosure states that the modem is within the television terminal, and the hardware upgrade card utilizes the internal modem of the television terminal. Therefore, the claim limitations of the instant application reciting including a modem on the hardware upgrade itself do not have the benefit of the December 9, 1992 filing date.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-9, 14, 18, 19, 23, 24, 28, 29, 42, 43, 45-50, 52-56, and 58-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. (5,357,276) [Banker] in view of Hoarty et al. (5,526,034) [Hoarty] and Palazzi III, et al. (5,327,554, of record) [Palazzi].

Regarding claims 1, 14, and 24, Banker discloses a hardware upgrade for a set top terminal (fig. 2B, expansion card 138) for use with a television program delivery system with menu selection of programs, the set top terminal having a microprocessor and microprocessor instructions for prompting generation of menus (figs. 5A-7B), the hardware upgrade comprising:

an interface to the set top terminal for receiving and processing subscriber input (the menu system displayed in figs. 5A-7B);

the set top terminal receives television program signals based on the subscriber input (col. 6, lines 26-42 and col. 7, line 67 - col. 8 line 6); and

a microprocessor connected to the interface (col. 7, lines 49-56),

wherein the hardware upgrade is a card insertable into the set top terminal (via connector 200, col. 7, lines 49-56); and

allowing actual transactions using two-way communications over a telephone type module with an interactive service via submenus (figs. 5A-7B), and the interface to the terminal comprises:

interactive software stored in memory of said hardware upgrade to provide enhanced functional capabilities for the set top terminal (the expansion card

provides additional memory for additional features, col. 7, lines 49-56, wherein the impulse pay-per-view feature is optional, col. 7, lines 57-66); and

processing circuitry to process said subscriber inputs associated with said interactive software (the 'secure microprocessor components' of the expansion card, col. 7, lines 49-56).

While Banker does teach that an impulse pay-per-view module of the telephone type is optional (col. 7, lines 57-66), Banker fails to disclose the hardware upgrade comprises a modem connected to the interface for communicating with one or more headends, adding a data modulation and demodulation function to the set top terminal such that data may be retrieved from the one or more headends and stored in local storage wherein the data comprising information from the interactive service for accessing an on-line database.

In an analogous art, Hoarty teaches that it was known in the art at the time for set top devices with expansion ports to support insertion of a modem device into said expansion port to add additional functionality to the set top device (col. 16 line 60 - col. 17 line 5).

It would have been obvious at the time to a person of ordinary skill in the art to modify the hardware upgrade of Banker to include a data modulation and demodulation function (modem) to the hardware upgrade card, as taught by Hoarty.

Banker and Hoarty fail to disclose using said modulation and demodulation function such that data may be retrieved from the one or more headends and stored in local storage wherein the data comprising information from the interactive service for accessing an on-line database.

In an analogous art, Palazzi discloses a set top device that includes an interface which allows connection of a modem which enables the device to communicate with a host database for retrieving and storing data comprising information relating to interactive services (col. 3 line 64 - col. 4 line 35; col. 8 line 51 - col. 9 line 2; and col. 9, lines 41-51), adding such functionality without requiring a fully integrated, specialized, and thus more costly, receiver (col. 1, lines 57-64).

It would have been obvious at the time to a person of ordinary skill in the art to modify the hardware upgrade of Banker to include retrieving data from the one or more headends and storing it in local storage wherein the data comprising information from the interactive service for accessing an on-line database, as taught by Palazzi.

Regarding claim 3, Banker, Hoarty, and Palazzi disclose the hardware upgrade of claim 1, wherein memory is connected to the microprocessor of the hardware upgrade (Banker, col. 7, lines 49-56).

Regarding claims 4 and 7, Banker, Hoarty, and Palazzi disclose the hardware upgrade of claim 1, wherein the modem is capable of communicating with the interactive service [on-line database] (communications with the host is a two way connection through the modem, Palazzi, col. 9, lines 13-29).

Regarding claims 5 and 8, Banker, Hoarty, and Palazzi disclose the hardware upgrade of claims 4 and 7, wherein the interactive service [on-line database] is outside of the television program delivery system (Banker and Palazzi both support using telephone lines for the two data transmission between the user terminal and host, see Banker, col. 7, lines 57-66 and Palazzi, col. 8, lines 40-50).

Regarding claims 6 and 9, Banker, Hoarty, and Palazzi disclose the hardware upgrade of claims 4 and 7, wherein the interactive services [on-line databases applications] include home shopping, news, financial information, and banking (Palazzi, col. 9 line 61 - col. 10 line 4).

Regarding claims 18 and 29, Banker, Hoarty, and Palazzi disclose the system of claims 14 and 24, but fails to disclose the terminal is an HDTV terminal.

Examiner takes official notice that the use of HDTV terminals is notoriously well known in the art, as the first demonstration of HDTV technology

was held in the US as early as 1981, and HDTV terminals allow users to enjoy much higher resolutions thus better picture quality over standard definition receivers receiving standard definition broadcasts.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Banker to be an HDTV terminal, allowing users to enjoy much higher resolutions thus better picture quality over standard definition receivers receiving standard definition broadcasts.

Regarding claims 19 and 23, Banker, Hoarty, and Palazzi disclose the terminal of claim 14, further disclosing additional hardware upgrades connectable to the terminal that include a storage hardware upgrade (Banker, col. 7, lines 49-56), but fail to disclose the terminal supports multiple hardware upgrades at once.

Examiner takes official notice that systems which have been designed to support additional hardware through expansion slots are often designed to support several at once, taking full advantage of the inherent flexibility afforded a system which is compatible with add on hardware (such as the type described by Banker), as the number of expansion slots a system can support is limited only by the amount of space available in the chassis and the amount of processor and bus resources available.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the terminal of Banker, Hoarty, and Palazzi to include

supporting multiple hardware upgrades at once, taking full advantage of the inherent flexibility afforded a system which is compatible with add on hardware.

Regarding claim 28, Banker, Hoarty, and Palazzi disclose the system of claim 24, wherein the television program delivery system is a satellite broadcast system (Banker, col. 3, lines 46-49).

Regarding claims 42, 52-56, just as Banker, Hoarty, and Palazzi disclose a system for delivering television programs as described in claim 24, they correspondingly disclose a method with the same limitations. However, Banker, Hoarty, and Palazzi fail to disclose a second hardware upgrade providing additional storage.

As stated above, Banker further discloses additional hardware upgrades connectable to the terminal that include a storage hardware upgrade (Banker, col. 7, lines 49-56), but fail to disclose the terminal supports multiple hardware upgrades at once. Examiner takes official notice that systems which have been designed to support additional hardware through expansion slots are often designed to support several at once, taking full advantage of the inherent flexibility afforded a system which is compatible with add on hardware (such as the type described by Banker), as the number of expansion slots a system can support is limited only by the amount of space available in the chassis and the amount of processor and bus resources available. Further, such additional

hardware is well known to include storage devices such as CD-ROMs, which are mass storage devices that can hold a great deal of information, relating to things such as games, education, and reference type material.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the terminal of Banker, Hoarty and Palazzi to include multiple supporting hardware upgrades at once, taking full advantage of the inherent flexibility afforded a system which is compatible with add on hardware, such additional hardware is well known to include storage devices such as CD-ROMs, which are mass storage devices that can hold a great deal of information, relating to things such as games, education, and reference type material.

Regarding claim 43, Banker, Hoarty, and Palazzi disclose the method of claim 42, wherein the received data comprises information concerning the television program (Banker teaches a type of received data is in regards to video on demand ordering information, col. 9, lines 25-54, one of the types of "screens" that are updated, as taught by Palazzi, col. 9, lines 21-29).

Regarding claims 45 and 48, Banker, Hoarty, and Palazzi disclose the method of claim 42, including communicating with an interactive service [on-line database] (Palazzi, col. 9, lines 13-29).

Regarding claims 46 and 49, Banker, Hoarty, and Palazzi disclose the method of claims 45 and 48, wherein the interactive service [on-line database] is outside of the television program delivery system (Banker, Hoarty, and Palazzi both support using telephone lines for the two data transmission between the user terminal and host, see Banker, col. 7, lines 57-66 and Palazzi, col. 8, lines 40-50).

Regarding claims 47 and 50, Banker, Hoarty, and Palazzi disclose the hardware upgrade of claims 4 and 7, wherein the interactive services [on-line databases applications] include home shopping, news, financial information, and banking (Palazzi, col. 9 line 61 - col. 10 line 4).

Regarding claims 58 and 59, Banker, Hoarty, and Palazzi disclose the method of claim 42, including remotely receiving the interactive subscriber input (from remote 126, Banker, fig. 2A) and generating a menu on a television (Banker, figs. 5A-7B), wherein the subscriber input comprises menu selections (Banker, col. 6, lines 43-53).

Regarding claims 60-63, Banker, Hoarty, and Palazzi disclose an apparatus for upgrading the capability of a set top terminal, as described above regarding claims 1, 14, and 24, but fail to disclose the received signals are compressed and decompressing a selected one of the compressed signals.

Examiner takes official notice that the practice of compressing video broadcasts is notoriously well known in the art, as compressed video streams consume less bandwidth than traditional uncompressed video streams, allowing broadcasters to widen the selection of channels and services to users in a limited amount of bandwidth.

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus of Banker, Hoarty, and Palazzi to include the received signals are compressed and decompressing a selected one of the compressed signals, allowing broadcasters to widen the selection of channels and services to users in a limited amount of bandwidth.

Regarding claim 64, Banker, Hoarty, and Palazzi disclose the apparatus of claim 60, further comprising a tuner, for selecting a data stream including a plurality of encrypted data streams (Banker, tuner 100, fig. 2A); a demodulator, for demodulating said selected data stream to produce a demodulated data stream (Banker, demodulator 109, fig. 2A); and a demultiplexer, for extracting an encrypted data stream from said demodulated data stream (since the system has been modified to support digital broadcasting, further demultiplexing is necessary to extract the desired stream), said encrypted data stream being coupled to an upgrade decryption module (Banker, col. 5, lines 7-25; col. 6, lines 59-67; and col. 7, lines 49-56).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN W. MILLER/
Supervisory Patent Examiner, Art Unit 2421

/Dominic D Saltarelli/
Examiner, Art Unit 2421